

Min Shi

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PERSONAL DATA

Current position: Staff Scientist
 Biostatistics & Computational Biology Branch
 National Institute of Environmental Health Sciences, NIH
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EDUCATION

5/2002 - 5/2005	Ph.D.	Biology (Human Genetics)	University of Iowa	Iowa City, IA
5/2004 - 12/2004	M.S.	Biostatistics	University of Iowa	Iowa City, IA
8/2002 - 5/2004	M.C.S.	Computer Sciences	University of Iowa	Iowa City, IA
8/1999 - 5/2002	M.S.	Biology	University of Iowa	Iowa City, IA
9/1993 - 7/1999	M.D./B.S.	Clinical Medicine	China Medical University	Shenyang, China

EMPLOYMENT HISTORY

11/2009- Current	Staff Scientist, Biostatistics & Computational Biology Branch, National Institute of Environmental Health Science, NIH
09/2005 – 11/2009	Research Fellow, Biostatistics Branch, National Institute of Environmental Health Science, NIH
05/2005 – 09/2005	Postdoctoral Fellow, Pediatrics Department., The University of Iowa

TEACHING EXPERIENCE

2011-2013	Guest Lecturer, North Carolina Central University
2012-2013	Biostatistics and Bioinformatics Short Courses, NIEHS
2001-2003	Teaching Assistant, The University of Iowa

HONORS AND AWARDS

2020	NIH Merit Award (group) for teaching Biostatistics and Bioinformatics Short Courses
2020	Special Act Award for supporting DIR
2020	Special Act Award (group) for teaching Biostatistics and Bioinformatics Short Courses
2019	Special Act Award for supporting DIR
2018	Special Act Award (group) for service as a member of the NIEHS Animal Care and Use Committee
2007	C. W. Cotterman Award, for best publication in the American Journal of Human Genetics during September 2006 – August 2007 by a trainee member of the American Society of Human Genetics American Society of Human Genetics

RESEARCH INTERESTS

Developing statistical methods to investigate the effects of genetic and environmental factors as well as their interplay on the risk of complex diseases using data collected from genetic, biological, and epidemiological studies. Conducting such studies to understand the etiology of complex diseases.

PROFESSIONAL ACTIVITIES

Statistical Consultant and Member, Animal Care and Use Committee at NIEHS 2017-now
 Statistical Consultant and Member, Clinical Advisory Committee at NIEHS 2019-now
 Member, Statistical Advisory Board, PLoS ONE 2013-now

Ad hoc reviewer for many journals including American Journal of Epidemiology, American Journal of Medical Genetics, Biometrics, Biostatistics, Epidemiology, Human Reproduction, Journal of Medical Genetics, The Pharmacogenomics Journal, Statistics in Medicine

PUBLICATIONS IN PEER REVIEWED JOURNALS

1. Hurson A, Choudhury P, Gao C, Hüsing A, Eriksson M, **Shi M**,..., Garcia-Closas M, Chatterjee N (52 authors in total) (accepted 2020) "Prospective Evaluation of Breast Cancer Risk Models Integrating Classical Risk Factors and Polygenic Risk in 15 Cohorts from Six Countries" *International J Epi*
2. Mamyrova G, Kishi K, **Shi M**, Targoff IN, Huber AM, Curiel RV, Miller FW, Rider LG, the Childhood Myositis Heterogeneity Study Group (accepted) "Anti-MDA5 autoantibodies associated with juvenile dermatomyositis constitute a distinct phenotype" *Rheumatology Dec*
3. Vellers HL, Verhein KC, Burkholder AB, Lee J, Kim Y, Lightfoot T, **Shi M**, Weinberg CR, Sarzynski MA, Bouchard C and Kleeberger SR (2020) "Association between Mitochondrial DNA Sequence Variants and VO2 max Trainability" *Medicine & Science in Sports & Exercise* 2020 Nov;52(11):2303-2309
4. Resnik D, Smith E, Master Z, **Shi M** (2020) "Survey on Equal Contributions in Biomedical Research Publications" *Accountability in Research: Policies and Quality Assurance* doi:10.1080/08989621.2020.1722947
5. Vsevolozhskaya O, **Shi M**, Hu F, Zaykin D (2020) "Gene-set analysis by combining decorrelated association statistics" *PLOS Comp Biol* doi: 10.1371/journal.pcbi.1007819
6. **Shi M**, O'Brien KM, Weinberg CR (2020), "Interactions between a Polygenic Risk Score and Non-genetic Risk Factors in Young-Onset Breast Cancer" *Scientific Reports* 2019 doi: 10.1038/s41598-020-60032-3.
7. Karmaus P, **Shi M**, Perl S, Cheung F, Biancotto A, Candia J, Cheung F, Kotliarov Y, Young N, Fessler MB & the CHI Consortium (2019) "Effects of rosuvastatin on the immune system in healthy volunteers with normal serum cholesterol" *JCI Insight*. 2019 Nov 1;4(21). pii: 131530. doi: 10.1172/jci.insight.131530.
8. Smith, Elise, Bryn Williams-Jones, Zubin Master, Vincent Larivière, Cassidy R Sugimoto, **Min Shi**, and David B Resnik (2019) "Misconduct and Misbehavior Related to Authorship Disagreements in Collaborative Team Science." *Sci Eng Ethics*. 2019 Jun 3. doi: 10.1007/s11948-019-00112-4
9. Smith, Elise, Bryn Williams-Jones, Zubin Master, Vincent Larivière, Cassidy R. Sugimoto, Adèle Paul-Hus, **Min Shi**, Elena Diller, Katie Caudle, and David B Resnik (2019) "Researchers' Perceptions Regarding Ethical Authorship Distribution in Collaborative Research Teams." *Sci Eng Ethics*. 2019 Jun 4. doi: 10.1007/s11948-019-00113-3.
10. Resnik D, Morales M, Landrum R, **Shi M**, Vasilevsky N, Champieux R (2019) "Effect of impact factor and discipline on journal data sharing policies" *Accountability in Research: Policies and Quality Assurance*, DOI: 10.1080/08989621.2019.1591277
11. Katie OM, D'Aloisio AA, **Shi M**, Murphy JD, Sandler DP, Weinberg CR (2019) "Perineal talc use, douching and the risk of uterine cancer" *Epidemiology* 2019 Nov;30(6):845-852. doi: 10.1097/EDE.0000000000001078
12. Weinberg CR, **Shi M**, O'Brien KM, Umbach DM (2019) "Adjustment for urinary creatinine or serum lipids for analytes assayed in pooled specimens" *Epidemiology* 2019 Sep;30(5):768-779 doi: 10.1097/EDE.0000000000001053
13. Resnik D, Smith E, **Shi M** (2018) "How U.S. Research Institutions are Responding to the Single Institutional Review Board Mandate" *Account Res*. 2018; 25(6): 340-349. doi: 10.1080/08989621.2018.1506337
14. Resnik D, Taylor J, Morris K, **Shi M** (2018) "A Study of Reliance Agreement Templates Used by U.S. Research Institutions" *IRB: Ethics & Human Research* 40(3)

15. O'Brien KM, Sandler DP, **Shi M**, Taylor JA, and Weinberg CR (2018) "Genome-wide association study of serum 25-hydroxyvitamin D in US women" *Frontiers in genetics* 9(67)
16. Liu X, Hong X, Tsai H, Mestan K, **Shi M**, Kefi A, Hao K, Wang G, Caruso D, Geng H, Gao Y, He J, Kumar R, Liu R, Wang H, Yu Y, Bartell T, Schleimer R, Weeks D, Pongratic J, Wang X (2018) "Genome-wide Association Study of Parental Genotypic Effects on Food Allergy Development in Offspring" *Medicine* Volume 97(9), March 2018, p e0043
17. **Shi M**, Wise A, Umbach D, Weinberg C (2018) "Simulating Autosomal Genotypes with Realistic Linkage Disequilibrium and a Spiked-in Genetic Effect" *BMC Bioinformatics* 19(1):2
18. Haaland QA, Jugessur A, Gjerdevik M, Romanowska J, **Shi M**, Beaty TH, Marazita ML, Murray JC, Wilcox AJ, Lie RT, Gjessing HK (2017) "Genome-wide analysis of parent-of-origin interaction effects with environmental exposure (PoOxE): An application to European and Asian cleft palate trios" *PLoS ONE* 12(9): e0184358
19. Bauer A, Avery C, **Shi M**, Weinberg C, Olshan A, Harmon Q, Luo J, Yang J, Manuck T, Wu M, Williams N, McGinnis R, Morgan L, Klungsoyr K, Trogstad L, Magnus P, Engel S (2017) "A family-based study of carbon monoxide and nitric oxide signaling genes and preeclampsia" *Paediatr Perinat Epidemiol* (32)1:1-12
20. Wang C, Chen R, **Shi M**, Cai J, Shi J, Yang C, Li H, Lin Z, Meng X, Liu C, Niu Y, Xia Y, Zhao Z, Kan H, Weinberg CR (2017) "Possible mediation by methylation in acute inflammation following personal exposure to fine particulate air pollution" *Am J Epidemiology* 187(3): 484-493
21. Weinberg CR, **Shi M**, Basso O, DeRoo L, Harmon Q, Wilcox A, Skjaerven R (2017) "Season of conception, smoking and preeclampsia in Norway" *Env Health Persp* 2017 Jun 29;125(6):067022. doi: 10.1289/EHP963.
22. **Shi M***, O'Brien K*, Sandler DP, Taylor JA, Wise AS, Zaykin DV, Weinberg CW (2016) "Previous GWAS hits in relation to young-onset breast cancer" *Breast Cancer Research and Treatment* 161 (2) 333-344 doi: 10.1007/s10549-016-4053-z
23. High M, Hye-Youn C, Marzec J, Wiltshire T, ..., **Shi M**, ..., Kleeberger S (21 authors in total) (2016) "Determinants of host susceptibility to murine RSV disease identify a role for the innate immunity scavenger receptor MARCO gene in human infants" *Ebiomedicine* 11:73-84 doi: 10.1016/j.ebiom.2016.08.011
24. Wise AS*, **Shi M***, Weinberg CR. (2016) "Family-based multi-SNP X chromosome analysis using parental information" *Frontiers in genetics* 2016 Feb 22;7:20. doi: 10.3389/fgene.2016.00020.
25. O'Brien K*, **Shi M***, Taylor JA, Wise AS, Zaykin DV, Sandler DP, Weinberg CW (2016) "A family-based, genome-wide association study of young-onset breast cancer: Inherited variants and maternally-mediated effects" *Euro J Hum Genet* 2016 Feb 17. doi: 10.1038/ejhg.2016.11
26. **Shi M**, DeRoo L, Sandler D, Weinberg CR (2015) "Migraine and possible etiologic heterogeneity for hormone-receptor-negative breast cancer" *Scientific Reports* 2015 Oct 12;5:14943. doi: 10.1038/srep14943.
27. **Shi M**, Umbach DM, Weinberg CR (2015) "Using parental phenotypes in case-parent studies" *Frontiers in genetics* 6:15, doi:10.3389/fgene.2015.00221
28. Weinberg CR, **Shi M**, DeRoo L, Basso O, Skjaerven R (2015) "Season and preterm birth in Norway: A cautionary tale" *International J Epi* 2015 Jun;44(3):1068-78. doi: 10.1093/ije/dyv100.
29. Wise A. S., **Shi M.**, Weinberg C. R. "Learning about the X from our parents" (2015) *Frontiers in genetics* 6:15, doi:10.3389/fgene.2015.00015.
30. Caballero M, Serra ME, ..., **Shi M**, ..., Polack FP (42 authors in total) (2015) "TLR4 genotype and environmental LPS mediate RSV bronchiolitis through Th2 polarization" *Journal of Clinical Investigation* 125, 571-582, doi:10.1172/JCI75183

31. **Shi M**, Umbach DM, Weinberg CR (2014) "Disentangling Pooled Triad Genotypes for Association Studies" *Annals of Hum Genet* 78(5): 345-356
32. Weinberg CR, **Shi M**, DeRoo LA, Taylor JA, Sandler DP, Umbach DM (2014) "Asymmetry in family history implicates nonstandard genetic mechanisms: Application to the genetics of breast cancer", *PLoS Genetics* 10(3):e1004174
33. Kim J, Stirling KJ, Cooper ME, Ascoli M, Momany AM, McDonald EL, Schaa KL, Ryckman K, Cosentino V, Gadow E, Saleme C, **Shi M**, Hallman M, Plunkett J, Teramo KA, Muglia LJ, Feenstra B, Geller F, Boyd HA, Melbye M, Marazita ML, Dagle JM, Murray JC (2013) "Sequence variants in oxytocin pathway genes and preterm birth" *BMC Medical Genetics* 14:77
34. **Shi M**, Umbach DM, Weinberg CR (2013) "Case-sibling studies that acknowledge unstudied parents and permit unmatched individuals" *International J Epi* 42(1): 298-307
35. van der Zanden L, Galesloot T, Feitz W, Brouwers M, **Shi M**, Knoers N, Franke B, Roeleveld N, van Rooij I (2012) "Exploration of gene-environment interactions, maternal effects and parent-of-origin effects in the etiology of hypospadias" *The Journal of Urology* 188(6): 2354-60
36. Gao J, Nalls MA, **Shi M**, Hernandez DG, Park Y, Huang X, Hollenbeck A, Singleton AB, Chen H (2012) "An exploratory analysis on gene-environment interactions for Parkinson disease" *Neurobiology of Aging* 33(10): 2528 e1-6
37. **Shi M**, Murray JC, Marazita ML, Lie RT, Munger RG, Ruczinski I, ..., Beaty TH (24 authors in total) (2012) "Genome wide study of maternal and parent-of-origin effects on the etiology of orofacial clefts" *Am J Med Genet, Part A* 158A(4): 784-94
38. Wu T, Fallin MD, **Shi M**, Ruczinski I, Liang KY, Hetmanski JB, Wang H, Ingersoll RG, Huang S, Ye X, Wu-Chou Y, Chen PK, Jabs EW, Shi B, Redett R, Scott AF, Beaty TH (2012) "Evidence of gene-environment interaction for the RUNX2 gene and environmental tobacco smoke in controlling the risk of cleft lip with/without cleft palate" *Birth Defects Res A Clin Mol Teratol* 94(2):76-83
39. **Shi M**, Weinberg CR (2011) "How much are we missing in SNP-by-SNP analyses of GWAS" *Epidemiology* 22(6):845-7
40. Weinberg CR, **Shi M**, Umbach DM (2011) "A sibling-augmented case-only approach for assessing multiplicative GxE interaction" *Am J of Epidem* 174(10):1183-9
41. Torgerson DG, Ampleford EJ, Chiu GY, Gauderman WJ, Gignoux CR, Graves PE, Himes BF, ..., **Shi M**, ... Ober C, Nicolae DL (76 authors in total) (2011) "Meta-analysis of genome-wide association studies of asthma in ethnically diverse north American populations" *Nature Genetics* 43: 887-892
42. **Shi M**, Umbach DM, Weinberg CR (2011) "Family based Gene-by-Environment Interaction Studies: Revelations and Remedies" *Epidemiology* 22(3): 400-407
43. **Shi M**, London SJ, Chiu GY, Hancock DB, Zaykin D, Weinberg CR (2011) "Using imputed genotypes for relative risk estimation in case-parent studies" *Am J of Epidem* 173(5): 553-9
44. Jugessur A, **Shi M**, Gjessing HK, Lie RT, Wilcox AJ, Weinberg CR, Christensen K, Boyles AL, Daack-Hirsch S, Nguyen TT, Christiansen L, Lidral AC and Murray JC (2011) "Fetal genetic risk of isolated cleft lip only versus isolated cleft lip and palate: A subphenotype analysis using two population-based studies of orofacial clefts in scandinavia." *Birth Defects Res Part A Clin Mol Teratol* 91(2): 85-92
45. Jugessur A*, **Shi M***, Gjessing HK, Lie RT, Wilcox AJ, Weinberg CR, Christensen K, Boyles AL, Daack-Hirsch S, Nguyen TT, Christiansen L, Lidral AC and Murray JC, (2010) "Maternal genes and facial clefts in offspring: A comprehensive search for genetic associations in two population-based cleft studies from Scandinavia" *PLoS One* 5(7): e11493 (*These authors contributed equally to this work)

46. **Shi M**, Umbach DM, Weinberg CR (2010) "Testing Haplotype-Environment Interactions Using Case-parent Triads" *Human Heredity*70: 23-33
47. Wu H, Romieu I, **Shi M**, Hancock DB, Li H, Sienna-Monge JJ, Chiu GY, Xu H, Estela del Rio-Navarro B, London SJ, *J Allergy Clin Immunol* (2010) "Evaluation of candidate genes in a genome-wide association study of childhood asthma in Mexicans" *The Journal of Allergy and Clinical Immunology* 125(2): 321-327.e13
48. Hancock DB, Romieu I, **Shi M**, Sienna-Monge J-J, Wu H, Chiu GY, Li H, del Rio-Navarro BE, Willis-Owens SAG, Weiss ST, Raby BA, Gao H, Eng C, Chapela R, Burchard EG, Tang H, Sullivan PF, London SJ (2009) "Genome-Wide Association Study Implicates Chromosome 9q21.31 as a Susceptibility Locus for Asthma in Mexican Children" *PLoS Genet* 5(8): e1000623
49. Kimani J, Yoshiura K, **Shi M**, Jugessur A, Moretti-Ferreira J, Christensen K, Murray JC, (2009) "Search For Genomic Alterations In Monozygotic Twins Discordant For Cleft Lip And/Or Palate" *Twin Research and Human Genetics* 12(5): 462-468
50. Weinberg CR, **Shi M** (2009) "The genetics of preterm birth: Using what we know to design better association studies" *Am J Epidemiol* 170:1373-1381
51. Jugessur A*, **Shi M***, Gjessing HK, Lie RT, Wilcox AJ, Weinberg CR, Christensen K, Boyles A, Daack-Hirsch S, Trung T, Lidral A, Murray JC(2009) "Genetic Determinants of Orofacial Clefts: Exploring 334 Cleft Candidate Genes in Two Population-based Cleft Cohorts from Scandinavia" *PLoS ONE* 4(4):e5385 (*These authors contributed equally to this work)
52. Kistner E, **Shi M**, Weinberg CR (2009) "Using Cases and parents to Study Multiplicative Gene-by-Environment Interaction" *Am J Epidemiol* 170:393-400
53. **Shi M**, Umbach DM, Weinberg CR (2009), "Using Case-parent Triads to Estimate Relative Risk Associated with a Candidate Haplotype" *Annals of Hum Genet* 73(pt3): 346-59
54. Boyles AL, Wilcox AJ, Taylor JA, **Shi M**, Weinberg CR, Meyer K, Fredriksen A, Ueland PM, Johansen AMW, Drevon CA, Jugessur A, Trung TN, Gjessing HK, Vollset SE, Murray JC, Christensen K, Lie RT (2009) "Oral facial clefts and gene polymorphisms in metabolism of folate/one-carbon and vitamin A: a pathway-wide association study" *Genet Epidemiol* 33: 247-255
55. **Shi M***, Mostowska A*, Jugessur A, Johnson MK, Mansilla A, Christensen K, Lie RT, Wilcox A, Murray JC (2009) "Identification of Microdeletions in Candidate Genes for Cleft Lip and/or Palate" *Birth Defects Res Part A Clin Mol Teratol* 85:42-51 (*These authors contributed equally to this work)
56. Vermeulen SH, **Shi M**, Weinberg CR, Umbach DM (2009) "A hybrid design: case-parent triads supplemented by control-mother dyads" *Genet Epidemiol* 33(2): 136-44
57. **Shi M**, Umbach DM, Vermeulen SH, Weinberg CR (2008) "Making the most of case-mother/control-mother studies" *Am J Epidemiol* 168: 541-47
58. **Shi M**, Wehby GL, Murray JC. (2008). "Review on genetic variants and maternal smoking in the etiology of oral clefts and other birth defects." *Birth Defects Res C* 84(1):16-29
59. Kimani J, **Shi M**, Daack-Hirsch S, Christensen K, Moretti-Ferreira D, Marazita M, Field L, Canady J, Murray JC (2007) "X-chromosome inactivation patterns in monozygotic twins and sib pairs discordant for non-syndromic cleft lip and/or palate". *Am J Med Genet* 143A: 3267-72
60. Steffen KM, Cooper ME, **Shi M**, Caprau D, Simhan HC, Dagle J, Marazita ML, Murray JC (2007) "Maternal and fetal variation in genes of cholesterol metabolism is associated with preterm delivery" *J Perinatol* 27 (11): 672-680
61. Ehn N, Cooper M, Orr K, **Shi M**, Johnson M, Caprau D, Dagle J, Johnson K, Marazita M, Merrill D, Murray JC (2007) "Evaluation of Fetal and Maternal Genetic Variation in the Progesterone Receptor Gene for Contributions to Preterm Birth" *Pediatr Res* 62(5): 630-634

62. **Shi M**, Umbach DM, Weinberg CR (2007) "Identification of Risk-related Haplotypes Using Multiple Linked SNPs from Nuclear Families" *Am J Hum Genet* 81(1): 53-66
63. **Shi M**, Christensen K, Weinberg CR, Romitti P, Bathum L, Lozada A, Morris RW, Lovett M, Murray JC (2007) "Orofacial cleft risk is increased with maternal smoking and specific detoxification-gene variants" *Am J Hum Genet* 80(1): 76-90
64. Zucchero T, Cooper M, Maher B, Daack-Hirsch S, Nepomuceno B, Ribeiro L, Caprau D, Christensen K, Suzuki Y, Machida J, Natsume N, Yoshiura K, Vieira A, Orioli I, Castilla E, Moreno L, Arcos-Burgos M, Lidral A, Field L, Liu Y, Ray A, Goldstein T, Schultz R, **Shi M**, Kondo S, Schutte B, Marazita M, Murray J (2004) "Interferon Regulatory Factor 6 (IRF6) is a Modifier for Isolated Cleft Lip and Palate" *New Engl J Med* 351(8):769-80
65. Suzuki Y, Jezewski P, Machida J, Watanabe Y, **Shi M**, Cooper M, Viet L, Tin N, Hai H, Natsume N, Shimozato K, Marazita M, Murray JC, (2004) "In A Vietnamese Population MSX1 Variants Contribute To Cleft Lip And Palate" *Genetics in Medicine* 6(3):117-25
66. Schultz RE, Cooper ME, Daack-Hirsch S, **Shi M**, Nepomucena B, Graf KA, O'Brien EK, O'Brien SE, Marazita M, Murray JC, (2004) "A Targeted Scan Of Fifteen Regions For Nonsyndromic Cleft Lip And Palate In Filipino Families" *Am J Med Genet* 125A(1): 17-22
67. **Shi M**, D. Caprau D, Dagle J, Christiansen L, Christensen K, Murray JC (2004). "Application of Kinetic Polymerase Chain Reaction and Molecular Beacon Assays to Pooled Analyses and High-Throughput Genotyping for Candidate Genes" *Birth Defects Res Part A Clin Mol Teratol* 70(2): 65-74. PMID:14991913
68. **Shi M**, Caprau D, Romitti P, Christensen K, Murray JC (2003). "Genotype Frequencies and Linkage Disequilibrium in the CEPH Human Diversity Panel for Variants in Folate Pathway Genes MTHFR, MTHFD, MTRR, RFC1, And GCP2" *Birth Defects Res Part A Clin Mol Teratol* 67(8): 545-9. PMID:14632302

*The authors contributed equally.

LETTERS AND BOOK CHAPTERS

1. Weinberg CR, **Shi M**, Umbach DM (2011) Re: "Genetic association and gene-environment interaction: A new method for overcoming lack of exposure information in controls." *Am J of Epidem*
2. Weinberg C, **Shi M**, Umbach D (2018, Chapman and Hall/CRC) "Family-based case-control approaches to study the role of genetics" *Handbook of Statistical Methods for Case-Control*, Chapter 26

MANUSCRIPTS SUBMITTED OR IN PREPARATION

1. Kresovich JK, Xu Z, O'Brien KO, **Shi M**, Weinberg CR, Sandler DP, Taylor JA (submitted) mBCRS: a methylation-based risk score for breast cancer
2. Bauer AE, Avery CL, **Shi M**, Weinberg CR, Olshan AF, Harmon QE, Luo J, Yang J, Manuck T, Wu MC, Klungsoyr K, Trogstad L, Magnus P, Engel SM (submitted) "Do genetic variants modify the effect of smoking on risk of preeclampsia in pregnancy?"
3. Nodzinski M*, **Shi M***, Krahn J, Wise A, Li Y, Li L, Umbach D, Weinberg (in preparation) "A stochastic search tool for detecting genetic epistasis using nuclear families"
4. **Shi M**, Rider LG, Pachman LM, Wedderburn L, Chinoy H, Danko K, Reed A, Miller FW, Mellins E, Ombrello M, the MYOGEN Consortium (in preparation) "Genetic Susceptibilities to Calcinosis in Patients with Dermatomyositis"
5. Elgart BM, Foley JF, Merrick BA, **Shi M**, Erman B3, Rider L, Schiffenbauer A, O'Hanlon TP, Fessler MB, Humble M, Gerrish KE, Miller FW (in preparation) "Circulating Cell-free DNA as a Biomarker in Systemic Autoimmune Diseases"

6. Goulding D, Blankenship-Paris TL, **Shi M** ..., Labor K (in preparation) "Serum buprenorphine concentrations following a single subcutaneous injection of Simbadol™, Buprenorphine SR-LAB, or Buprenex® to mice"
7. Webb DR, Churchill SR, Hill GD, McGee C, **Shi M**, King-Herbert A, Blankenship-Paris TL (submitted) "Effects of Buprenorphine, Chlorhexidine, and Low-level laser Therapy on Wound Healing in Mice"
8. Yu L, Liu J, Yan Y, Burwell A, Castro L, **Shi M**, Dixon D (submitted) "Metalloestrogenic" effects of cadmium downstream of G protein-coupled estrogen receptor and mitogen-activated protein kinase pathways in human uterine fibroid cells"

INVITED TALKS

"A Nonparametric Method for Finding Risk-Haplotype Tagging Alleles Using Cases and Their Parents" at Advanced Methodology Student Workshop at the 20th annual meeting of Society for Pediatric and Perinatal Epidemiologic Research (Boston MA, June 2007)

"Haplotype-Based Association Methods: Cleft Lip/Palate As An Example" at Wright State University, Boonshoft School of Medicine, Lifespan Health Research Center (Dayton OH, Dec 2008)

"Haplotype-Based Association Methods: Cleft Lip/Palate As An Example" at University of Iowa, Environmental Health Sciences Research Center (Iowa City IA, Dec 2008)

"Method for Haplotype-Based Association Using Case-Parent Triads" at State University of New York, Downstate Medical Center, School of Public Health (Brooklyn NY, Jan 2009)

"Methods for Family-Based Association Studies with Applications to Orofacial Clefts" Keynote Speaker at the 2nd international conference of "Project New Life" (HaiKou, China 2011)

"Using families to study genetic and environmental risk factors of complex diseases" at University of Tennessee Health Science Center (Memphis TN, Jan 2013)

"Case-sibling studies that acknowledge unstudied parents and permit unmatched individuals" University of California at Merced (Merced CA, April 2013)

"Studying genes and environments in the etiology of complex diseases" University of Michigan (Michigan MI, April 2013)

CONFERENCE TALKS

"Application of Kinetic PCR and Molecular Beacon Technology to Pooled Sample and High-Sensitivity Analysis of the MTHFR Gene" **Shi M**, Dagle J, Caprau D, Murray JC, The American Society of Human Genetics 51th Annual meeting (San Diego CA, Oct 2001)

"Gene-by-Environment Interaction in Studies Based on Nuclear Families" **Shi M**, Umbach DM, Weinberg CR, 2010 Joint Statistical Meetings (Vancouver, BC Canada 2010)

"Case-sibling studies that acknowledge unstudied parents and permit unmatched individuals" **Shi M**, Umbach DM, Weinberg CR, 2013 Eastern North American Region (ENAR) spring meeting (Orlando, FL 2013)

SELECTED POSTER PRESENTATIONS AND PUBLISHED ABSTRACTS

1. **Shi M**, Christensen K, Lozada A, Romitti R, Murray JC, "Maternal cigarette smoking and variants in GSTP1 and GSTT1 contribute to the etiology of orofacial clefting", The American Society of Human Genetics 53rd Annual meeting (Los Angeles, CA 2003)

2. **Shi M**, Christensen C, Weinberg C, Lozada A, Romitti P, Murray JC, “Analysis of maternal smoking and sixteen detoxification genes in the etiology of orofacial clefts”, The American Society of Human Genetics 54th Annual meeting (Toronto, Canada 2004)
3. **Shi M**, Umbach DM, Weinberg CR, “A method for finding risk haplotypes using cases and their parents”, The American Society of Human Genetics 56th Annual meeting (New Orleans, LA 2006)
4. **Shi M**, Mostowska A, Christensen K, Lie, RT, Jugessur A, Wilcox A, Weinberg CR, Murray JC, “Detecting deletion regions in candidate genes of cleft lip and palate”, The American Society of Human Genetics 57th Annual meeting (San Diego, CA 2007)
5. **Shi M**, Umbach DM, Vermeulen SH, Weinberg CR, “Studying genetic contributions by mother and child to susceptibility: efficient design and analysis for diseases of early life”, The American Society of Human Genetics 58th Annual meeting (Philadelphia, PA 2008)
6. **Shi M**, Umbach DM, Weinberg CR, “Gene-by-Environment Interaction in Studies Based on Nuclear Families”, The American Society of Human Genetics 60th Annual meeting (Washington, DC 2010)
7. **Shi M**, Umbach DM, Weinberg CR, “Making the Most of Case-Sibling Studies”, The American Society of Human Genetics 61th Annual meeting (Montreal, Canada 2011)
8. **Shi M**, Umbach DM, Weinberg CR, “Making use of missing parents and unmatched siblings in case-sibling studies”, 2012 Triangle Statistical Genetics Conference (Chapel Hill, NC 2012)
9. **Shi M**, Umbach DM, Weinberg CR, “Case-sibling studies that acknowledge unstudied parents and enroll unmatched individuals”, The American Society of Human Genetics 62th Annual meeting (San Francisco, CA 2012)
10. **Shi M**, DeRoo LA, Sandler DP, Weinberg CR “Menstrual migraine and breast cancer”, The Society of Epidemiologic Research Annual Meeting (Boston, MA 2013)
11. **Shi M**, Umbach DM, Weinberg CR, “Disentangling Pooled Triad Genotypes for Association Studies”, The American Society of Human Genetics 63rd Annual meeting (Boston, MA 2013)
12. **Shi M**, Umbach DM, Weinberg CR, “Making use of parental phenotypes in case-parent genetic studies”, The American Society of Human Genetics 64th Annual meeting (San Diego, CA 2014)
13. **Shi M**, DeRoo LA, Sandler DP, Weinberg CR “Migraine and possible etiologic heterogeneity for hormone-receptor-negative breast cancer”, The Joint Statistical Meeting (Seattle, WA 2015)
14. **Shi M**, Umbach DM, Weinberg CR, “Using parental phenotypes in case-parent genetic studies”, The International Genetic Epidemiology Society meeting (Baltimore, MD 2015)
15. **Shi M**, O’Brien K, Taylor JA, Wise AS, Zaykin DV, Sandler DP, Weinberg CW, “A family-based, genome-wide association study of young-onset breast cancer: Inherited variants and maternally-mediated effects” The American Society of Human Genetics 66th Annual meeting (Vancouver, Canada 2016)
16. **Shi M**, Wise AS, Umbach DM, Weinberg CR, “Simulation of Genome-wide Genotypes for Triads with Realistic Linkage Disequilibrium Structures” 50th annual meeting of Society of Epidemiologic Research (Seattle, WA 2017)
17. Weinberg CR, **Shi M**, O’Brien KO, Umbach DM, “Adjusting for urinary creatinine or serum lipids when pooling samples: The just-add-water approach” The Joint Statistical Meeting (Vancouver, BC 2018)
18. **Shi M**, O’Brien KO, Weinberg CR, “Interactions Between a Polygenic Risk Score and Nongenetic Risk Factors in Young-Onset Breast Cancer” The Joint Statistical Meeting (Denver, CO 2019)